

**REMARKS**

The present application relates to a method of regenerating tissues of the multipurpose, fast growing and nitrogen fixing elite tropical legume tree *Acacia mangium*, as well as a method for the genetic transformation of this plant. Claims 14-24 and 28-36, which are directed to methods of transforming *Acacia mangium* with a gene of interest and to a method of preparing transgenic *Acacia mangium* cells, are presently pending. Claims 15-17, 19 and 32-33 were determined to be free of the prior art in the previous Office Action.

In this response Applicants amend claims 14, 28 and 34. The amendment to claim 34 corrects a typographical error. Claims 15-17, 19, 22, 32-33 and 35-36 are canceled. In the outstanding Office Action the Examiner has withdrawn his previous rejection of Claims 14-24 and 28-36 under 35 U.S.C. §112, second paragraph, as being indefinite.

**Rejection Under 35 U.S.C. §112, First Paragraph**

Claims 14-24 and 28-36 are again rejected under 35 U.S.C. §112, first paragraph, as allegedly containing subject matter which is not described in the specification so as to enable one skilled in the art to make and/or use the disclosed inventions. In this response Applicants have amended claims 14 and 28 to incorporate a more specific description of the steps of the transformation method for *Acacia mangium* disclosed in their specification. Applicants believe that claims 14 and 28 and claims 18, 20, 21, 23-24, 29-31 and 34 that depend therefrom are in condition for allowance, and respectfully ask that the rejection under 35 U.S.C. §112, first paragraph, be withdrawn as it may be applied to the amended claims.

**Rejections under 35 U.S.C. §103(a)**

Claims 14, 18, 20-22 28-31 and 34-36 are again rejected under 35 U.S.C. § 103(a) as being unpatentable over Edwards *et al.* (July 1997, WO 97/23126) in view

of Bhaskar *et al.* (1996, *Indian Journal of Experimental Biology* 34:590-591.) Edwards *et al.* teach a method for transformation of a Eucalyptus tree species in which shoots, rooted shoots or seedlings are cultivated in an oxygenated liquid medium. Bhaskar reports the results of a study of the response of nodal bud explants of *Acacia mangium* in MS medium supplemented with various concentration of two different plant growth regulators.

While Edwards does describe a method for propagating *Acacia mangium* in culture, it provides no disclosure of a method for transforming the plant species with a gene of interest using *Agrobacterium*. Moreover, it does not describe the use of 0.5 M mannitol to prepare an explant of *Acacia mangium* to be used for transformation.

Likewise, Bhaskar *et al.* do not teach or even suggest a method for transforming *Acacia mangium* plants or cells. Nothing in WO 97/23126 or in Bhaskar *et al.*, taken individually or together provides or even suggests the methods of the present invention as presently claimed.

Nothing in the cited references teach or suggest the use of activated *Agrobacterium* activated by growth in induction medium containing acetosyringone for the transformation of *Acacia mangium* explants. Moreover, nothing teaches the use of the *Acacia mangium* explants that have been soaked in 0.5 M mannitol prior to co-cultivation with the activated *Agrobacterium*. Applicants respectfully assert that the cited references fail to make a *prima facia* case of obviousness and respectfully request that the rejection of Claims 14 and 28 and the claims that depend therefrom, as that rejection may be applied to the claims as presently amended, be withdrawn.

Claims 14, 18, 20-22 28-31 and 34-36 are again rejected under 35 U.S.C. § 103(a) as being unpatentable over Edwards *et al.* (July 1997, WO 97/23126) in view of Bhaskar *et al.* (1996, *Indian Journal of Experimental Biology* 34:590-591), further in view of Mohamed. Mohamed reports that Murashige and Skoog medium

supplemented with 2  $\mu$ M 6-benzylaminopurine (BA) induced adventitious shoots on mature endosperm explants of *Passiflora foetida*, while gibberellic acid and casein hydrolysate stimulated growth and development of shoot primorida. Nothing in Mohamed teaches or even suggests a method for transformation of any plant, much less a method for transformation of *Acacia mangium*, nor does the reference suggest the transformation method of the present claims.

*Passiflora foetida* is a plant species commonly known as stinking passion flower, passion flower or pop vine, which is a plant species totally unrelated to *Acacia mangium*. Mohamed does not teach the use of *Agrobacterium* that has been activated by growth in induction medium nor the co-cultivation of the activated *Agrobacterium* with *Acacia mangium* explants that have been soaked in 0.5 M mannitol prior to co-cultivation. There is simply no basis for asserting that the results of Mohamed, using totally unrelated plant species, add anything to disclosure of the two previously recited references.

Applicants believe that the rejection of claims 14, 18, 20-22 28-31 and 34-36 under 35 U.S.C. § 103(a) over Edwards in view of Bhaskar and further in view of Mohamed is made in error and respectfully ask that the rejection be withdrawn as it may be applied to the claims of the application as presently amended.

Applicants believe the present claims are in condition for allowance and respectfully request a timely notice to that effect. Should additional issues arise that can be effectively dealt with in a timely discussion with Applicant's

Serial No. 09/936,612  
Filed: January 2, 2002  
Page 12

representative, the Examiner is respectfully asked to contact the undersigned Representative so that the case can be quickly passed to issue.

Date: July 26, 2004

Respectfully submitted,

By Barbara Webb Walker

Barbara Webb Walker  
Attorney for Applicants  
Registration No. 35,400  
ROTHWELL, FIGG, ERNST & MANBECK, P.C.  
Suite 800, 1425 K Street, N.W.  
Washington, D.C. 20005  
Telephone: (202)783-6040